

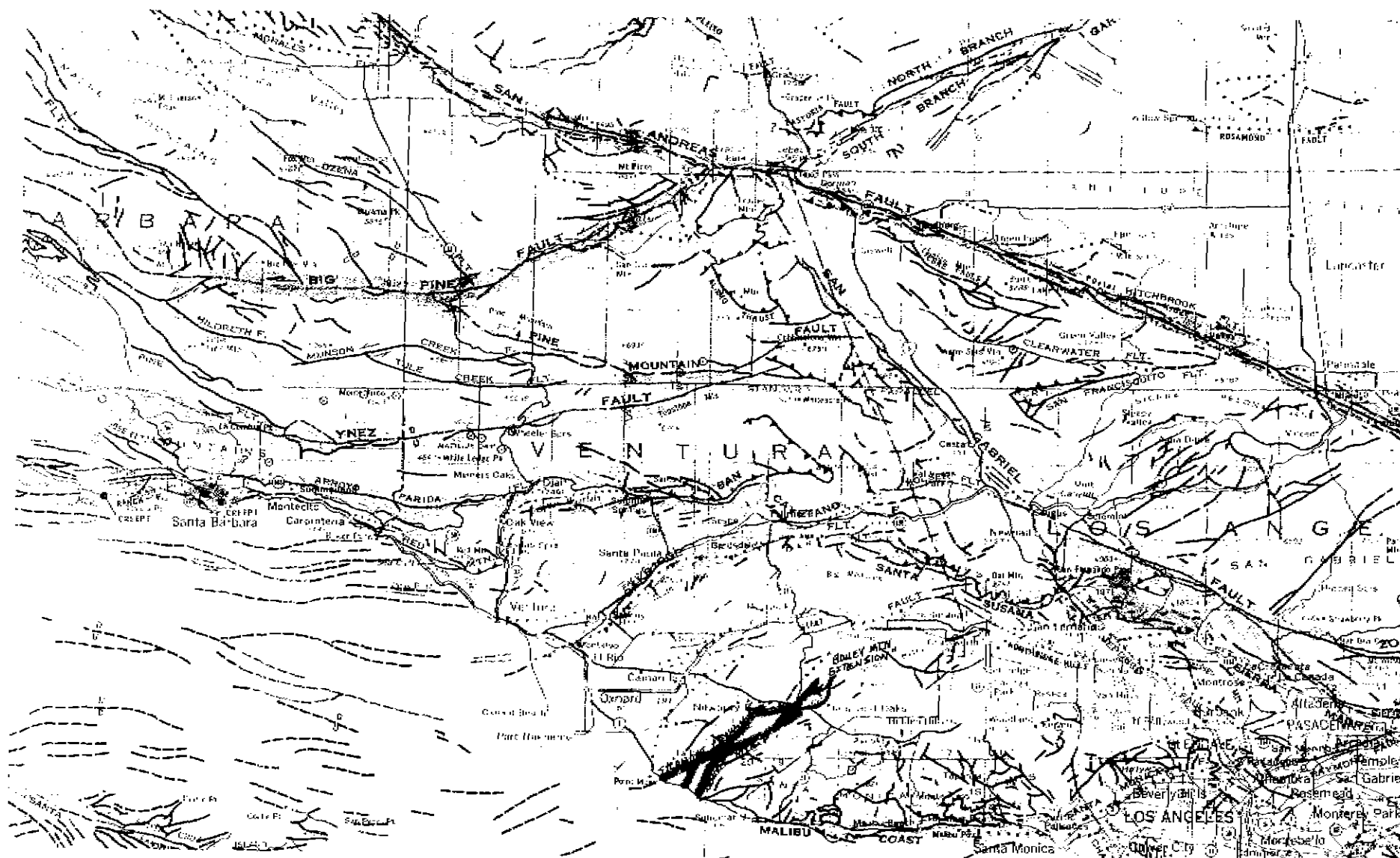
CALIFORNIA DIVISION OF MINES AND GEOLOGY

Fault Evaluation Report FER-66

May 19, 1977

1. Name of fault: Sycamore Canyon-Boney Mountain zone.
2. Location of faults: Point Mugu, Triunfo Pass, Newbury Park, and Thousand Oaks 7.5 minute quadrangle, Ventura County (see figure 1).
3. Reason for evaluation: Part of a 10-year program; Weber, et al. (1975, p. 176) indicate that fault is "late (?) Quaternary."
4. List of references:
 - a) Jennings, C.W., 1975, Fault map of California with locations of volcanoes, thermal springs and thermal wells: California Division of Mines and Geology, California Geologic Data Map Series, Map no. 1, scale 1:750,000.
 - b) Renke, D.F., 1957, Geology of a part of Newbury Park quadrangle, Ventura County, California: Unpublished M.A. thesis, University of California, Los Angeles, map scale 1:24,000.
 - c) Weber, F.H., Jr., Cleveland, G.B., Kahle, J.E., Kiessling, E.F., Miller, R.V., Mills, M.F., Morton, D.M., and Cilweck, B.A., 1973, Geology and mineral resources study of southern California: California Division of Mines and Geology, Preliminary Report 14, 102 p., 5 pl., 9 figures, map scale 1:48,000.
 - d) Weber, F.H., Jr., Kiessling, E.W., Sprotte, E.C., Johnson, J.A., Sherburne, R.W., and Cleveland, G.B., 1975, Seismic hazards study of Ventura County, California: California Division of Mines and Geology, Open File Report 76-5L.A., 396 p., 9 pl., map scale 1:48,000.

FAULT EVALUATION REPORT
 FIGURE 1. General location of the
 Sycamore Canyon - Cone Mountain
 Fault zone (Jennings, 1975, slightly
 modified, scale 1:750,000).



- e) Ziony, J.I., Wentworth, C.M., Buchanan-Banks, J.M., and Wagner, H.C., 1974, Preliminary map showing recency of faulting in coastal southern California: U.S. Geological Survey, Miscellaneous Field Studies Map MF-585, 15 p., map scale 1:250,000, 3 plates.

5. Summary of available data:

The Sycamore Canyon and Boney Mountain faults are primarily dip-slip faults on which some strike-slip movement may have occurred (Renke, 1957, p. ²⁴⁻²⁶_A). As noted above, Weber, et al. (1975, p. 176) felt that these two faults constitute a fault zone which may be late Quaternary in age. Weber, et al. (1973, plate 1) shows no localities where Quaternary units are offset. ~~The later version~~ ^{Weber, et al.} (1975, plates 5A and 5B) depicts a fault ("Boney Mountain Extension") as inferred to cut a late Pleistocene terrace deposit at the north end. However, the authors state (p. 196), "Possible minor shearing in older alluvium (the terrace deposit) of late Quaternary age in the Thousand Oaks area is so indistinct as to be inconclusive." (1) (2)

Renke (1957) noted no evidence of Quaternary displacement along either fault. He felt, as do Ziony, et al. (1974), that the intrusion of Miocene volcanics along the two faults limits the age of movement. Renke noted no shearing of the volcanics along the fault.

6. Interpretation of air photos: None.
 7. Field observations: None.
 8. Conclusions:

The Sycamore Canyon and Boney Mountain faults appear to not have moved since the Miocene. Some late Pleistocene faulting is possible, but the evidence is inconclusive, and certainly does not

justify assigning a late Quaternary age to the whole zone. Any late Quaternary faults would appear, from the description noted in item 5, to be ill-defined.

9. Recommendations:

Zoning of these faults is not recommended. No further work appears necessary as a part of this project.

10. Investigating geologist's name; date:



Theodore C. Smith
Assistant Geologist
May 19, 1977

*I agree with
recommendations.
GWA
6/14/77*